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AGM1

POPOVIC, R.

EXAMINER

JOHN R. BENEFIEL
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BIRMINGHAM, MICHIGAN 48009

1 008 ART UNIT PAPER NUMBER

05/19/93

DATE MAILED:

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 4/29/93 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire THREE month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-11 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-11 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with Informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on _____, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received
☐ been filed in parent application, serial no. _____; filed on _____

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

I. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-3, and 8-9 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson.

Bratten discloses a filtering apparatus substantially as claimed. Claims 1 and 3 differ from Bratten by reciting:

"a continuous loop of a porous permanent filter media belt, including a segment down said rear wall and passing along said tank bottom over said perforate section to an exit point at the end of said tank opposite said rear wall;

guide means guiding said continuous permanent media belt out of said tank at a side opposite said rear wall, beneath said tank bottom, up outside of said rear wall and back into said tank;"

and

"said chain conveyor loops drivingly engaging segments of said permanent filter media belt by frictional contact to advance said segments with said chain conveyor segments during indexing thereof."

Estabrook discloses a similar filter which employs a conveyor 25 (see figures 1&6) which comprises an endless (permanent) Cambridge belt (see col. 3, lines 5-25). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the apparatus of Bratten by employing a Cambridge belt in order to support and better move the (disposable) media belt 22 (fig. 1 of Bratten).

Anderson discloses a similar filtering apparatus which employs an endless supporting screen 16 (see fig. 1) which follows a path around the filtering tank 11 (see fig. 1). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Bratten by situating the Cambridge belt external of the tank, as disclosed, in order to facilitate inspection and maintenance of the belt and associated components.

II. Claims 4-7 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson as applied to claims 1-3 and 8-9 above, and further in view of Ishigaki.

Claim 4 differs from the references as applied above by reciting: "further including a scraper edge inclined to scrape the lower surface of said permanent filter media belt."

Claim 5 differs from the references as applied above by reciting: "further including a trough beneath said tank, said belt guide means causing said permanent filter media belt to be looped within said trough, and wash jet means directly washing jets from the upper surface of said belt in said trough."

Claim 6 differs from the references as applied above by specifying that the "scraper edge to slants down and away from the lower surface of said permanent filter media belt."

Claim 7 differs from the references as applied above by specifying that the "scraper edge is affixed to said collection trough."

Ishigaki discloses a similar filtration apparatus which employs a scraper 24, receptacle (trough) 26, and washing nozzles 25, to remove filter cake, catch it, and wash the filter medium 15, respectively (all shown in figure 1). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the apparatus of the references as applied above by incorporating a scraper, receptacle, and spray nozzles as disclosed in order to efficiently remove filter cake. With respect to claim 7, the point where the scraper is connected is considered an obvious matter of choice in design to one skilled in the art since the scraper would perform the same function in substantially the same way, no matter where it was located. As such, claim 7 is considered patentably indistinguishable from the references as applied above.

III. Claims 10-11 are rejected under 35 U.S.C. § 103 as being unpatentable over Bratten in view of Estabrook and Anderson as applied to claims 1-3 and 8-9 above, and further in view of Lee.

Claim 10 differs from the references as applied above by specifying that the "side edges of said permanent filter media belt are coated."

Claim 11 further specifies the coating to be "urethane plastic impregnated into the porous material of said side edges."

Lee discloses the sealing of the edge portions of filters of this type with rubber (col. 1, lines 25-36). In view of this disclosure, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of the references as applied above by applying a suitable impervious material such as poly-urethane, the modern day counterpart of rubber, to the edge of the filter belt in order to seal it.

IV. Applicant's arguments with respect to claims 1-11 have been considered but are deemed to be moot in view of the new grounds of rejection.

The indicated allowability of claim 3 is withdrawn in view of the newly discovered prior art. The delay in citation of this art is regretted.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS NOT FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Popovics whose telephone number is (703) 308-0684.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.

RSP
5-14-93
rjp
May 14, 1993


STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
ART UNIT 138